Solid State Relay
EPI600 Series Single Phase AC Output

- Zero Switching or Random-on
- Ratings from 10A to 100A @ 48-660VAC
- SCR Output
- AC or DC Input
- DBC substrate for Superior Thermal Performance
- Dielectric Strength 4000VACrms
- LED Indication
- RC/MOV and TVS Protection Circuit as Optional

Product Description
EPI600 series industrial single phase relay with SCR output is widely used in many industrial applications. The relay can be used for resistive, inductive or capacitive load. The control input voltage is 4-32VDC or 90-280VAC. The output current is rated at 10A, 25A, 40A, 60A, 80A, or 100A @ 48-660VAC.

Product Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>10A</th>
<th>25A</th>
<th>40A</th>
<th>60A</th>
<th>80A(1)</th>
<th>100A(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC:4-32VDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC:90-280VAC</td>
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</tbody>
</table>

Technical Specification

### Input Circuit

- **Control Voltage Range**
  - DC Input: 4-32VDC
  - AC Input: 90-280VAC
- **Minimum Turn-On Voltage**
  - DC Input: 4VDC
  - AC Input: 90VAC
- **Minimum Turn-Off Voltage**
  - DC Input: 1VDC
  - AC Input: 10VAC
- **Maximum Input Current**
  - DC Input: 25mA
  - AC Input: 10mA

### Output Circuit

- **Load Voltage**: 48-660VAC
- **Maximum Turn-On Time**
  - DC Input Random-On: 1ms(2)
  - DC Input Zero-On: 1/2AC Cycle + 1ms
  - AC Input: 20ms

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## Installation

### Maximum Turn-Off Time
- DC Input: 1/2AC Cycle + 1ms
- AC Input: 40ms

### Maximum Surge Current [@10ms]

<table>
<thead>
<tr>
<th>Current (A)</th>
<th>40A</th>
<th>60A</th>
<th>80A</th>
<th>100A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>460A</td>
<td>860A</td>
<td>1280A</td>
<td>1400A</td>
</tr>
</tbody>
</table>

### Maximum I2t For Fusing [@10ms]

<table>
<thead>
<tr>
<th>Current (A)</th>
<th>10A</th>
<th>25A</th>
<th>40A</th>
<th>60A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>350A²S</td>
<td>780A²S</td>
<td>960A²S</td>
<td>3600A²S</td>
</tr>
</tbody>
</table>

### Maximum On-State Voltage Drop [@ Rated Current]

<table>
<thead>
<tr>
<th>Current (A)</th>
<th>10A~60A</th>
<th>80A~100A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>5mA</td>
<td>0.1mA</td>
</tr>
</tbody>
</table>

### Minimum Off-State dv/dt @ Maximum Rated Voltage

<table>
<thead>
<tr>
<th>Current (A)</th>
<th>10A~40A</th>
<th>40A~60A</th>
<th>60A~80A</th>
<th>80A~100A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>500V/μs</td>
<td>1600Vpk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### General Information

**Dielectric Strength, Input/Output/Base [50/60Hz]**

≥4000Vrms / 2500Vrms

**Ambient Operating Temperature Range**

-30°C ~ +80°C

**Ambient Storage Temperature Range**

-30°C ~ +100°C

**Weight [Typical]**

96g

## Application

High-low Temperature Chamber, Plastics Machinery, Incubation Machine, Oiling Machine, HVAC, Elevator Lighting, Fountain Controller.

## Connection

![Connection Diagram]

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**Important Notice**

1. When the ambient temperature is more than 40℃ or many EPI series are installed closely together, the user should take load discount into account according to the thermal curve.
2. If the load current is more than 5A, suitable heatsink should be added to the SSR.

**Product Certification**

![Certifications]

**General Note:**
1. For 80A or 100A, no RC snubber circuit
2. For code 084, the turn-on time is 0.02msec (DC Control Models)
3. For 100A, the weight is 150g
4. For 100A, TUV certificate is not available at present
5. For 100A, UL certificate is under application